

REMARKS

Claims 1-26 were pending in this application as of the March 3, 2005 mailing date of the current office action, and stood rejected pursuant to 35 U.S.C. §103 over various combinations of references. Applicant respectfully traverses the current claim rejections, which Applicant submits are inappropriate – and, therefore, should be withdrawn – in view of the at least the amendments set forth above and/or for the reasons explained in the remarks that follow.

Claim 1 has been amended herein to incorporate the features of claim 6, which, therefore, is canceled herein without prejudice. Each of claim 7 and claim 8 has been amended herein to change its dependency from now canceled claim 6 to claim 1. Also, each of claim 22 and claim 24 has been amended to recite that the first resilient braided member has a first braid angle and that the second resilient braided member has a second braid angle, wherein at least one of the first braid angle and the second braid angle is varied along the length of its resilient braided member.

Applicant notes, for the record, that claims 1, 22 and 24 are amended herein solely to expedite prosecution of this application. By amending these claims, Applicant does not dedicate their subject matter to the public, and does not acquiesce to the Examiner's reason(s) offered in support of the rejections of the amended claims. Applicant also reserves the right to seek patent protection for claims similar or identical to the amended claims in one or more related applications.

The Rejection of Claims 1-5, 9-12, 15-19 and 21-26

Claims 1-5, 9-12, 15-19 and 21-26 are rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,083,152 to Strong (“the Strong patent”) in view of U.S. Patent No. 4,899,787 to Ouchi et al. (“the Ouchi patent”).

Applicant respectfully traverses these claim rejections because neither the Strong patent nor the Ouchi patent, whether considered alone or in proper combination, discloses or suggests various features of these claims, wherein such features are not only novel and non-obvious, but they also provide useful benefits in practice.

Claim 1 recites that the first braided tube of an inspection tube includes a wire braid having a braid angle that varies along the length of said wire braid. Claim 10 is directed to an inspection tube that comprises a first wire braided tube having a first braid angle and a second wire braided tube having a second wire braid angle, wherein the first braid angle is less than the second braid angle. Claim 22 recites an insertion tube and claim 24 pertains to an inspection device, each of which comprises, in part, a first resilient braided member that has a first braid angle and a second resilient braided member that has a second braid angle, wherein at least one of the first braid angle and the second braid angle is varied along the length of its resilient braided member. And claim 23 is directed to a method of making an insertion tube for an inspection device in which a first braid having a first braid angle is placed over at least a portion of a helical coil member and a second braid having a second braid angle is placed over at least a portion of the first braid, and wherein the first braid angle is different from the second braid angle.

These claimed features serve a very useful purpose, namely they provide variable stiffness along an insertion tube/member. That, in turn, provides the insertion tube/member with both the flexibility to maneuver around obstacles yet also the stiffness to overcome frictional forces or sticking that may be encountered during the insertion process (see, e.g., the text located between page 9, line 28 and page 10, line 4 of the specification).

Scrutiny of the Strong patent and the Ouchi patent reveals that neither reference actually mentions the term “braid angle,” let alone that there could be braid angle variation that would lead to beneficial results. The Examiner correctly acknowledges this fact on pages 3-4 of the current office action (“Strong and Ouchi . . . [are] silent with respect to the braided tube having a wire braid which varies along its length.”

However, the Examiner attempts to impute the concept of braid angle into the cited references by alleging that the Strong patent discloses a wire braid having a braid angle of “about or less than about 45 degrees relative to the longitudinal axis of the first braided tube, as seen in Figure 1” and by further alleging that it would have been obvious “to construct a second braid, as taught by Ouchi et al., wherein the second braid included a wire braid of about or greater than about 45 degrees relative to the axis of the second longitudinal axis of the second braided tube in order to have control over the flexibility properties of the tube.” Applicant respectfully disagrees with the Examiner’s conclusion and reasoning. Neither of these references refers to the term “braid angle,” let alone braid angle variation. And the Examiner’s visual determination that Figure 1 of the Strong patent discloses a braided tube having a braid angle less than 45 degrees is not a proper basis for rejection.

For at least these reasons, claims 1, 10 and 22-24 are patentable over the Strong patent and the Ouchi patent, as are claims 2-5, 7-9, 11-21, 25 and 26, each of which either directly or ultimately depends from (and, therefore, incorporates the patentable features of) one of claims 1, 10, 22, 23 and 24.

The Rejection of Claims 6-8, 13, 14 and 20

The Examiner rejects claims 6-8, 13, 14 and 20 pursuant to 35 U.S.C. §103(a) as being unpatentable over the Strong patent, in view of the Ouchi patent, and in further view of U.S. Patent No. 5,741,429 to Danadio, III et al. ("the Danadio patent"). As noted above, claim 6 has been canceled without prejudice and its features have been incorporated into claim 1.

Each of claims 7 and 8 now depends directly from claim 1, which, as discussed above, is patentable over the combination of the Strong patent and the Ouchi patent. And each of claims 13, 14 and 20 depends either directly or ultimately from claim 10, which also is patentable over the same combination of references.

As noted above, in rejecting claims 6-8, 13, 14 and 20, the Examiner acknowledges that the Strong patent and the Ouchi patent are silent with respect to a "braided tube having a wire braid which varies along its length;" however, the Examiner further asserts that the Danadio patent teaches an "analogous" device "having a multi-wire coil 21 which is capable of being formed in varying configurations . . ." The Examiner further contends that the combination of these three references would have made it obvious "to provide a tube with varying flexibility characteristics over its entire length."

Although the Danadio patent does appear to generally touch upon varying certain characteristics of a wire coil of a tubular member, it does not list braid angle among the “characteristics” that can be varied. Therefore, even assuming, *arguendo*, that the Danadio patent, the Strong patent and/or the Ouchi can be properly combined without impermissible hindsight, the Danadio patent does not remedy the above-described deficiencies of the combination of the Strong patent and the Ouchi patent.

For at least this reason, claims 1, 10 and 22-24 are patentable over the Strong patent, the Ouchi and the Danadio patent, as are claims 2-5, 7-9, 11-21, 25 and 26, each of which directly or ultimately depends from (and thus incorporates the patentable features of) one of claims 1, 10, 22, 23 and 24.

Conclusion

In view of at least the amendments and remarks set forth herein, currently pending claims 1-5 and 7-26 are believed to be patentable over the various combinations of references cited by the Examiner in the current office action. Therefore, claims 1-5 and 7-26 are in condition for immediate allowance. Reconsideration of these claims and allowance of this application are respectfully requested.

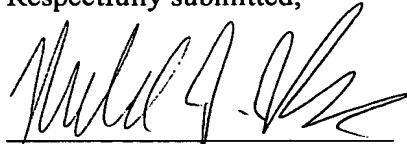
If the undersigned can be of any assistance in advancing the prosecution of this application, the Examiner is invited to contact him using the contact information provided below.

U.S. Serial No. 10/763,131
Attorney Docket No. 702-107
Response to 03/03/05 Office Action

Authorization To Charge Necessary Fees

While no fee is believed due with this submission, the Commissioner is hereby authorized to charge any necessary fees associated with this submission, or credit any overpayment, to Deposit Account No. 50-0289.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Richard J. Roos', written over a horizontal line.

Richard J. Roos
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Dated: June 2, 2005

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